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CRIMSON CLOVER (*Trifolium incarnatum*).

Crimson clover is also known as scarlet clover, German clover, French clover, Italian clover, Egyptian clover, and carnation clover. It is a vigorous upright annual somewhat resembling red clover, but the leaves and stems are more hairy. The flowers are borne in elongated or oblong heads 1 to 2 inches in length, and are usually scarlet, though there are also varieties with white, pink, and pink and red flowers.

Crimson clover is a native of southern Europe and has long been cultivated in the southern and central section of that continent. Its usual height is about 18 inches, but under very favorable conditions it makes a growth of from 2 to 3 feet. Crimson clover requires a rather mild, moist climate and can be grown more or less successfully as a winter crop in the States south of a line through northern New Jersey, eastern Tennessee, and Texas. It succeeds best in New Jersey, Delaware, Maryland, Virginia, and North Carolina. Outside of this section the successful production of this plant is confined to local areas and can not be depended upon year after year. It will not withstand prolonged drought nor severely cold winters. As a summer crop it has no place.

In Europe four or five varieties are recognized agriculturally, distinguished chiefly by the time required for the plants to mature and by the color of the flowers. In this country but one sort is generally handled by seedsmen. There is a growing interest, however, in the late white variety, as by growing an early and a late variety the harvesting season is considerably prolonged.

Soils.—Although crimson clover is grown principally for increasing the fertility of the soil, it will not, as a rule, succeed as well as cowpeas on very poor land. Well-drained loam and sandy soils are best adapted to its growth. On stiff, heavy clay soils the growth is usually too slow and small to be satisfactory for an early green-manure crop. Wet soils are not suited to its growth.

Sowing.—Throughout the Middle Atlantic States the seeding may be done from July 15 to September 15, and even later in the Gulf States. As a rule the best results are obtained by sowing the seed in July and August. It is important that considerable growth be made before winter. The seed should be sown at the rate of from 15 to 20 pounds to the acre. It is always desirable to sow in moist weather, "between showers" if possible. If sown during dry weather a poor catch is a common result.

Uses and value.—Crimson clover is most commonly sown in corn at the time of the last cultivation. It is also often planted after a small-grain crop. The best practice in such cases is to plow the stubble and allow the seed bed to become well settled before planting. The crimson clover may be sown alone or in mixture with rye or wheat, either for hay or pasture. It is also sown sometimes with rape.

Crimson clover is also much used as a green-manure crop in orchards and on truck farms. In orchards strips of the crimson clover are sometimes allowed to mature, and thus reseed the land. In such cases the land should be harrowed at right angles to the clover strips so as to scatter the seed as evenly as possible. As a green-manure crop crimson clover can be plowed under before the end of May.

Pasture.—Crimson clover may be pastured in autumn and early spring, either when sown alone or in mixture with small grain or rape. It is really advantageous to pasture in fall, as close-cropped plants go through the winter better than taller ones. The plant is relished by all kinds of stock, but care must be exercised when pasturing with sheep or cattle, as there is considerable danger from bloat or hoven. For this reason, when grazing is desired crimson clover should be seeded with a small winter grain, such as wheat or rye, which lessens this danger considerably. There is also a little danger in pasturing crimson clover after the heads begin to mature, as these are apt to form "hair-balls," especially in horses.

Soiling.—Crimson clover alone or mixed with wheat or rye makes a splendid soiling crop for dairy cattle. It is especially valuable as it comes at a time when there is little other green forage available.

Hay.—Well-cured crimson clover hay is relished by all kinds of stock and is, if anything, a little superior to that of red clover, having about the same composition with a slightly higher degree of digestibility. Under ordinary conditions the yield is from 1½ to 3 tons of hay to the acre. For hay crimson clover should be cut as soon as it starts to bloom. After this period the hairs, principally those on the stems of the flower heads and calyces of the separate flowers, become stiff and barbed and are likely to form hair-balls in the stomachs and intestines of animals, which act as plugs or otherwise interfere with the vital functions, sometimes causing death. This is particularly true of horses. In plants just beginning to bloom the hairs are still soft and flexible.

Crimson clover hay should be thoroughly dry before being put in the mow, as if moist it will generate much heat, not only injuring the hay but endangering the barn. If on account of weather it can not be thoroughly dried, it should be stacked or ricked or placed in an open shed, but not in the barn.

Seed.—The seed of crimson clover is larger than that of red clover, perfectly oval in shape, and when fresh has a bright reddish yellow color with a high polish. As the seed gets older the polish is gradually lost and the color changes to a dull reddish brown. Germination deteriorates rapidly with age, and old seed should be avoided.

When harvested for seed great care should be taken to cut as soon as the seed is ripe; otherwise the loss from shattering is likely to be great. Because of this it is best to cut the crop when it is a little damp. The most satisfactory method of harvesting is with a self-rake reaper, the plant being dropped off in bunches of suitable size to dry and handle easily. Some farmers cut with a mower, rake while damp, and cock to allow it to dry. This at best shatters considerable seed.

The thrashing should be done as soon as the crop is dry enough. A few days of damp, muggy weather will often cause the seed to sprout, and for this reason many seed growers arrange it so that the seed is cut one day and thrashed the second or third day following. The yield varies from 4 to 10 bushels to the acre.

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